Tuesday, March 20, 2018 [T334]

POSTER SESSION I: IMPROVED SCIENCE THROUGH THE IMPLEMENTATION OF A PLANETARY SPATIAL DATA INFRASTRUCTURE II: PRODUCTS

6:00 p.m. Town Center Exhibit Area

Moon S. H. Choi H. L. ***POSTER LOCATION #499***
Alignment and Ortho-Rectification of Lunar Surface Image Using the NASA Ames Stereo Pipeline **[#1384]**
The ortho-rectification and alignment of a lunar surface image from the LROC Experimental Data Record data using Ames Stereo Pipeline is outlined.

Park Y. J. Moon S. H. Choi H. L. ***POSTER LOCATION #500***
High-Resolution Reconstruction for NoData Gaps in Narrow Angle Camera Digital Terrain Models Using Gaussian Process-Latent Variable Model **[#1402]**
Data-driven approach for high-resolution reconstruction for NoData gaps in Apollo 17 landing site NAC DTMs is proposed by using GP-LVM and optimization.

Tremblay S. S. Dombard A. J. Schurmeier L. R. Plotnick R. E. ***POSTER LOCATION #501***
Global Lacunarity of Planetary Datasets: Methodology **[#2460]**
Lacunarity: / Doing it on a whole sphere / Shows global patterns.

Yamamoto S. Matsunaga T. Nakamura R. Sekine Y. Hirata N. et al. ***POSTER LOCATION #502***
An Automated Method for Crater Counting from Digital Terrain Model Using Rotational Pixel Swapping Method **[#1213]**
We have developed a fully automated algorithm for crater age determinations based on the Rotational Pixel Swapping (RPSW), which uses DTM/DEM data.

Emami E. Ahmad T. Bebis G. Nefian A. Fong T. ***POSTER LOCATION #503***
Lunar Crater Detection via Region-Based Convolutional Neural Networks **[#2381]**
An advanced crater detection algorithm based on Convolutional Neural Network able to detect 92% of craters on images captured by Lunar Reconnaissance Orbiter.

Emami E. Ahmad T. Bebis G. Nefian A. Fong T. ***POSTER LOCATION #504***
On Crater Classification Using Deep Convolutional Neural Networks **[#2566]**
An investigation on the application and performance comparison of deep convolutional neural networks in crater classification.

Benedix G. K. Norman C. J. Bland P. A. Towner M. C. Paxman J. et al. ***POSTER LOCATION #505***
Automated Detection of Martian Craters Using a Convolutional Neural Network **[#2202]**
Counting craters is / Easier when you use a / Supercomputer.

Silburt A. Ali-Dib M. Zhu C. Jackson A. P. Valencia D. et al. ***POSTER LOCATION #506***
Deep Learning to Detect Lunar Craters and Transfer-Learn to Mercury **[#2135]**
We train a convolutional neural network to recognise craters in digital elevation model images of the Moon. Our results compare well to human generated data.

McDougall D. S. Greenhagen B. T. Shirley K. A. Glotch T. D. ***POSTER LOCATION #507***
Global Broadband Thermal Emission Maps of the Moon **[#1059]**
Surface properties / Are hard to find for the Moon. / These new maps will help.

Kato H. Ogawa Y. Hirata N. Demura H. Narusawa M. et al. ***POSTER LOCATION #508***
Application of Deep Learning for Automatic Detection of Lunar Swirls by Combining Data from Multi-Band Imager and DEM **[#1869]**
My study is automatic identification of lunar swirls by deep learning. I evaluate the application of deep learning to automatic detection of lunar swirls.

Kramer G. Fonteneau L. Irving A. Goodrich C. Combe J.-P. ***POSTER LOCATION #509***
The Spectro-Chemineralogic Image Cube: A Database for Mineral Identification and Improvement of Spectral Models **[#1742]**
It's like an image cube with additional layers that provide mineral and chemical information for the same pixel as the spectrum.

Herd R. K. ***POSTER LOCATION #510***
Some Stages in the Petrogenesis of Ordinary Chondrites: Constraints from Textural Observations **[#2790]**
BSE images of chondrules and their matrices may be used to define sequential textural contexts within which analyzed phases may be placed.

Sheikh D. ***POSTER LOCATION #511***
An Extensive Analysis of Chondrule Textures in Un-Equilibrated Ordinary Chondrites and the Creation of a Chondrule Database **[#1203]**
A chondrule database system used to individualize chondrules, rather than group them by texture, can potentially better constrain chondrule forming mechanisms.

Martin A. C. Boyd A. K. Robinson M. S. ***POSTER LOCATION #512***
Controlling LROC NAC Photometric Images **[#1621]**
Absolute control is applied to LROC NAC images to increase scientific value and allow precise phase, emission, and incidence angle calculations from NAC DTMs.

Politte D. V. Arvidson R. E. O'Sullivan J. A. He L. Powell K. E. et al. ***POSTER LOCATION #513***
End-to-End Processing of CRISM Along-Track Oversampled Observations with Atmosphere and Temperature Corrections **[#2063]**
We have developed and validated an end-to-end method for deriving single scattering albedo for CRISM hyperspectral data cubes over wavelengths 0.45 to 3.8 μm.

Williams N. R. Lethcoe H. A. Berger L. M. Trautman M. R.
Fergason R. L. et al. ***POSTER LOCATION #514***
Controlled Basemaps for Mars 2020 Rover Candidate Landing Sites **[#2799]**
Rover landing sites: / New maps show science targets' / Precise locations.

Laura J. R. ***POSTER LOCATION #515***
Sparse Multi-Image Control Using AutoCNet: CTX **[#2750]**
The AutoCNet library is used to identify correspondences between CTX images for control.

Shepherd M. Kirk R. L. Sides S. C. ***POSTER LOCATION #516***
A Novel Technique for Precision Geometric Correction of Jitter Distortion for the Europa Imaging System and Other Rolling-Shutter Cameras **[#2188]**
Active pixel cameras like EIS suffer geometric distortions from motion during readout. We show how these distortions can be corrected with subpixel accuracy.

Banks M. E. Barr A. C. Clark R. N. Domingue D. L. Ghent R. R. et al. ***POSTER LOCATION #517***
Toolbox for Research and Exploration (TREX): Investigations of Fine Particulate Materials on the Lunar Surface **[#2653]**
The lunar investigations of TREX, a SSERVI node developing tool for exploration of airless surfaces for human and robotic *in situ* resource utilization missions.

Domingue D. L. Allain J.- P. Banks M. Christoffersen R.
Cintala M. et al. ***POSTER LOCATION #518***
Toolbox for Research and Exploration (TREX): Investigations of Fine-Grained Materials on Small Bodies **[#1141]**
The Toolbox for Research and Exploration (TREX) is a NASA SSERVI (Solar System Exploration Research Virtual Institute) node.

Noe Dobrea E. Z. Banks M. Hendrix A. R. Lane M. D.
Osterloo M. et al. ***POSTER LOCATION #519***
Toolbox for Research and Exploration (TREX): Robotic Decision Making in a Fine-Grained Environment **[#1618]**
We describe the goals of Theme 4 of the SSERVI Toolbox for Research and Exploration investigation.

Lane M. D. Allain J. P. Clark R. N. Cloutis E. A. Dyar M. D. et al. ***POSTER LOCATION #520***
Toolbox for Research and Exploration (TREX): The Fine-Particle Spectral Library **[#1098]**
TREX focuses on fine-particulates (terrestrial, lunar, meteorite) measured at ambient and space-relevant conditions for application to airless body research.

Hirata N. Hirata N. Sugiyama T. Kanamaru M. Senshu H. et al. ***POSTER LOCATION #521***
Asteroid Shape Reconstruction Efforts in Hayabusa2 Mission: A Dry-Run Test for Landing Site Selection with Simulated Data **[#1855]**
Methods on shape modeling of asteroid for Hayabusa2 mission is tested with simulated images of a fake asteroid.

Ernst C. M. Gaskell R. W. Barnouin O. S. Daly R. T. ***POSTER LOCATION #522***
A Complete, Coregistered, and Searchable Collection of Phobos and Deimos Images from 1975–2016 **[#2769]**
The Small Body Mapping Tool now contains a complete, coregistered, and searchable collection of Phobos and Deimos data from Viking, Phobos2, MGS, MRO, and MEX.